

## Patent Claims

1. Circuit for frame rate (field repetition frequency) conversion in a video signal reproduction device using a motion-adaptive method, having a motion detector for producing motion values of pixels by means of which a device for switching a field sequence with the frame rate being doubled can be actuated, characterized in that
- the motion detector (3) comprises a first device (31) for producing pixel motion signals, which have a first state for each pixel which is found to have moved and a second state for each pixel which is found to have been stationary, and has a second device (32) by means of which the pixel motion signals are corrected in order to produce motion values in such a manner that a state which differs from matching states of adjacent pixels is ignored.
2. Circuit according to Claim 1, characterized in that, in order to determine the first or second state, the first device (31) has units (316, 317, 318) for producing controlled characteristics for assessment of field differences as a function of line differences, with the motion sensitivity being increased if the line differences are small, and the motion sensitivity being reduced if the line differences are large.
3. Circuit according to Claim 2, characterized in that the first device (31) has circuit units (311, 312; 313, 314, 315) for forming line and field differences, with the field differences being assessed by the units (316, 317, 318) for producing controlled characteristics to each of which the line differences are applied and being mapped onto 1-bit signals, and these 1-bit signals being logically combined by means of an OR gate (319) in order to produce the pixel motion signals.

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4. Circuit according to Claim 2 or 3,  
characterized in that  
the third, the fourth and the fifth circuit unit (313,  
5 314, 315) are used to produce three field differences  
from a first, a second and a third field, and in that  
the units (316, 317, 318) for producing controlled  
characteristics are controlled using the maximum of the  
line difference signals from the first and the second  
10 field.

5. Circuit according to one of the preceding claims,  
characterized in that  
the second device (32) comprises a first correction  
15 unit (321) for processing the motion signals of each  
pixel in such a manner that the first state is  
corrected to the second state if the motion signals of  
all the adjacent pixels are in the second state, with a  
previously corrected state being used for the  
20 processing of a subsequent pixel.

6. Circuit according to one of the preceding claims,  
characterized in that  
the second device (32) comprises a second correction  
25 unit (322) for processing all the motion signals in a  
line in such a manner that the first state is changed  
to the second state if the motion signals in one and  
two lines above and in one line underneath are in the  
second state.

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7. Circuit according to Claim 6,  
characterized in that  
the second device (32) comprises further correction  
units (327, 328) by means of which moving picture areas  
35 are homogenized by insertion of motion signals which  
are in the first state.

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